



TUESDAY, OCTOBER 23, 2018

SCIENCE MUSEUM OKLAHOMA, OKLAHOMA CITY, OK



NSF AWARD NO. OIA-1301789 ♦ WWW.OKEPSCOR.ORG ♦ 405.744.9964

PANEL SESSION

PARTICIPANTS' BIOS

ARE YOU INTERESTED IN

Aerospace Engineering

Family Medicine

Art Restoration

Computer Software Engineering

Veterinary Medicine

Meteorology

Are you interested in **AEROSPACE ENGINEERING?**

CAREER OVERVIEW

Humans have always longed to fly and to make other things fly, both through the air and into outer space—aerospace engineers are the people that make those dreams come true. They design, build, and test vehicles like airplanes, helicopters, balloons, rockets, missiles, satellites, and spacecraft.

PERSONALITY TRAITS OF SOMEONE WHO IS SUCCESSFUL IN THE FIELD

Creativity, curiosity, strong math and analytical skills, teamwork, good written and verbal ability, and attention to detail.

SUBJECTS TO STUDY IN HIGH SCHOOL

Chemistry, physics, computer science, algebra, geometry, calculus, English; if available, applied technology, statistics

HIGHER EDUCATION

Bachelor's degree minimum

PROJECTED INCOME

U.S. Minimum Wage: \$15,080/yr.

U.S. Mean Wage: \$49,630/yr.

Median Aerospace Engineer Wage: \$109,650/yr.

PROJECTED JOB GROWTH (2014-2024)

-3% to -9%

Source & credit: www.sciencebuddies.org



KRISTEN (KRISTY) M. KNIEST

Chief Engineer, Boeing

Biography

Kristy Kniest is the Director of Engineering & Chief Engineer of Aircraft Modernization and Modification residing in Strike, Surveillance, and Mobility business of Boeing Defense, Space, and Security (BDS). She leads a global team of engineers that provide cutting-edge modernization upgrades, engineering sustainment, and heavy maintenance to a variety

of military and commercial derivative products including bombers, tanker, transport, and executive transport, cargo, and surveillance aircraft. She will also serve as the Chief Engineer for the Oklahoma City site. Kniest holds bachelor's degrees in computer science, mathematical science, and English from Rice University in Houston. She also holds a master's in business administration from Washington University.

Questions and Answers

What inspired you to want to pursue a career in your field?

My dad served in the US Air Force for 30+ years. I have always had a love of airplanes and an affinity for our nation's military as a result.

What is one of the coolest things you have done in your job?

Leading the VC-25 program (which is known as Air Force One when the President is on board).

What is a non-academia related skill that you find valuable in your job?

Typing!

What do you enjoy doing outside of work?

Gardening and horseback riding.

What advice would you give to your 14-year-old self?

Make a career plan. I was fortunate in my career "happening/evolving," but it was more luck than plan.

Are you interested in **FAMILY MEDICINE?**

CAREER OVERVIEW

Physicians work to ease physical and mental suffering due to injury and disease. They diagnose medical conditions and then prescribe or administer appropriate treatments. Physicians also seek to prevent medical problems in their patients by advising preventative care. Ultimately, physicians try to help people live and feel better at every age.

PERSONALITY TRAITS OF SOMEONE WHO IS SUCCESSFUL IN THE FIELD

Good physical and emotional stamina, focus, empathy, calm during emergencies, outstanding communication skills, and enjoy interacting with people.

SUBJECTS TO STUDY IN HIGH SCHOOL

Biology, chemistry, physics, geometry, algebra II, pre-calculus, English; if available, computer science, statistics, physiology, biomedical science

HIGHER EDUCATION

Formal education and training requirements for physicians are among the most demanding of any occupation—4 years of undergraduate school, 4 years of medical school, and 3-8 years of internship and residency, depending on the specialty selected. A few medical schools offer combined undergraduate and medical school programs that last 6 years, rather than the customary 8 years. Premedical students must complete undergraduate work in physics, biology, mathematics, English, and inorganic, and organic chemistry. Students also take courses in the humanities and the social sciences. Some students volunteer at local hospitals or clinics to gain practical experience in the health professions.

PROJECTED INCOME

U.S. Minimum Wage: \$15,080/yr.

U.S. Mean Wage: \$49,630/yr.

Median Physician Wage: \$196,380/yr.

PROJECTED JOB GROWTH (2014-2024)

7% to 13%

Source & credit: www.sciencebuddies.org



KELLEY M. LOBB, M.D.

Board Certified Family Medicine
Physician, Mercy Physicians

Biography

Dr. Kelley Lobb is currently a Family Medicine Physician at Mercy Physicians in Norman, Oklahoma. She holds a bachelor of science in zoology from the University of Oklahoma, a doctorate in medicine from the University of Oklahoma College of Medicine, and was a Resident Physician at the OU Health Sciences Center, including Chief Resident for one year.

Questions and Answers

What inspired you to want to pursue a career in your field?

I was inspired by my father, who was a Medical Physicist. Initially, I planned to pursue a career in pathology, but I fell in love with patient interaction.

What is one of the coolest things you have done in your job?

Being able to identify what is making someone sick and help make them better will always be one of my favorite things to do.

What is a non-academia related skill that you find valuable in your job?

Listening and understanding what another person is trying to say.

What is your proudest accomplishment in your career?

Not giving up when things got hard.

Do you think being a woman in your field is advantageous in any way to you and the work you do?

Absolutely. As a woman, there will always be people and topics that I can relate more freely with.

What do you enjoy doing outside of work?

I love to sing, and I love spending time with my family.

What advice would you give to your 14-year-old self?

You can do anything you put your mind to. You just have to believe in yourself and never give up on your dream—even when it's hard.

Are you interested in **ART RESTORATION?**

CAREER OVERVIEW

A fine art restorer is responsible for repairing damages done to artwork such as paintings, murals, sculptures, ceramics, textiles, paper works, books, and other cultural objects or historical artifacts. The job often requires some research to determine the best course of action to take, particularly with antiques and other valuable works where the original should not be changed in any way. Sometimes the job involves, more simply, cleaning the artwork and preserving it for the future.

PERSONALITY TRAITS OF SOMEONE WHO IS SUCCESSFUL IN THE FIELD

Attention to detail, patience, and a passion for art.

SUBJECTS TO STUDY IN HIGH SCHOOL

Chemistry, art

HIGHER EDUCATION

Education requirements can vary. Do you want to carry on a family business, or do you want to become a certified restorer to broaden your horizons? University courses can be helpful in either case, and the knowledge you'll get is often necessary for certification. If you decide you want to study fine art restoration, focus on courses like chemistry, anthropology, studio art, and art history. You can pursue a degree ranging from an associate degree all the way up to a Ph.D. It's common for a student to apprentice under a master conservator after graduation, before jumping into a major restoration project.

PROJECTED INCOME

U.S. Minimum Wage: \$15,080/yr.

U.S. Mean Wage: \$49,630/yr.

Median Art Restorer Wage: \$40,000/yr.

PROJECTED JOB GROWTH (2014-2024)

5%

Source & credit: www.thebalancecareers.com, www.study.com



VICTORIA LUPIA

Art Conservator

Biography

Victoria Book Lupia is a Professional Associate of the American Institute for Conservation of historic and Artistic Works who holds a master of science in art conservation from the Winterthur/University of Delaware Program in Art Conservation. As an objects conservator, she specializes in a wide variety of materials, including ceramics, plaster, metal, wood,

leather, stone, and mixed-media and all types of objects, ranging from fine art sculptures to historic toothbrushes and meteorites. She has exceptional experience with Native American artifacts and regalia, as well as with Jewish religious objects. Currently, Victoria runs Legacy Conservation, LLC, a small conservation services firm that assists museums, private individuals, and government agencies with conservation and preservation of unique cultural heritage objects.

Questions and Answers

What is one of the coolest things you have done in your job?

It's hard to choose. I helped prepare Ramses I for his triumphant return to Egypt. The mummy had been stolen by grave robbers and sold to a wealthy Canadian mining engineer in 1860. It was purchased by the Michael C. Carlos Museum in the 1990s, and after some research, the museum repatriated the skeleton to Egypt. I also cleaned the teeth of a T-Rex named Sue, but driving around with some Picassos in the backseat was surprisingly exhilarating.

What is a non-academia related skill that you find valuable in your job?

Listening. Developing a sensitivity to what people are actually saying—not necessarily with the words they use. When you learn why something matters, you can begin to figure out what needs to be done.

Do you think being a woman in your field is advantageous in any way to you and the work you do?

Most art conservators are women. Perhaps it is because women are more comfortable than some men talking about intangible things like “sympathetic moods” and “ideal states” and discussing the non-monetary value of a work of art or piece of history. Turning the question around, conservation may be advantageous to women; only a portion of conservators are employed full-time in institutions. Therefore, it is possible to work freelance, perhaps raising a family, if that is what a conservator wishes to do.

What do you enjoy doing outside of work?

I have a young family, including a daughter who has Down syndrome and is the delight of my life. I am my son's homeroom mom, an amateur baker, and that keeps me pretty busy.

What advice would you give to your 14-year-old self?

Take opportunities to meet, or even just watch people who are really good at what they do. It is always worthwhile.

Are you interested in **COMPUTER SOFTWARE ENGINEERING?**

CAREER OVERVIEW

Are you interested in developing cool video game software for computers? Would you like to learn how to make software run faster and more reliably on different kinds of computers and operating systems? Do you like to apply your computer science skills to solve problems? If so, then you might be interested in the career of a computer software engineer.

PERSONALITY TRAITS OF SOMEONE WHO IS SUCCESSFUL IN THE FIELD

Deductive and inductive reasoning, mathematical reasoning, original thinking, and an understanding of what people want from their computers.

SUBJECTS TO STUDY IN HIGH SCHOOL

Physics, chemistry, computer science, geometry, algebra, algebra II, calculus, English

HIGHER EDUCATION

Most employers prefer applicants who have at least a bachelor's degree and experience with a variety of computer systems and technologies. In order to remain competitive, computer software engineers must continually strive to acquire the latest technical skills. Advancement opportunities are good for those with relevant experience.

PROJECTED INCOME

U.S. Minimum Wage: \$15,080/yr.

U.S. Mean Wage: \$49,630/yr.

Median Computer Software Engineer Wage: \$106,860/yr.

PROJECTED JOB GROWTH (2014-2024)

7% to 13%

Source & credit: www.sciencebuddies.org



AMANDA HARLIN

JavaScript Developer
Founder of Techlahoma

Biography

Amanda Harlin is a JavaScript developer who works for herself at Eyeframe.Software. She has also worked at startups and universities, co-owns a co-working space, and ran a nonprofit.

Questions and Answers

What is one of the coolest things you have done in your job?

Working on video games is definitely the coolest things I think I've done. They're not triple-a titles by any means, but I'm working on a mobile game to teach my daughter, Ada, new words in Spanish.

What is a non-academia related skill that you find valuable in your job?

Perseverance. I know a lot of folks in tech would have probably responded with the importance of soft skills—which is true—but I think that perseverance is likely more important to uphold as a valuable skill for anyone who is coming from an under-represented background into tech. There are plenty of times that I felt like giving up but if you can power through the hard times the payoff is here.

What is your proudest accomplishment in your career?

I think making Techlahoma is one of the proudest things I've done...we've helped folks learn tech skills, design skills, hardware skills, and information security skills. I'm **really** proud that Techlahoma has had an awesome online streaming set up as well, so that folks who are in more rural places (including our viewers in other countries!) can participate and learn for free. I'm also proud of ThunderPlains JavaScript conference for having run since 2013. I've met other folks at big tech conferences who dismissed Oklahoma as a whole based on incorrect and dated assumptions. I'm proud that we've done so much to fight against this image and show the world how collaborative and awesome the OK community is.

What do you enjoy doing outside of work?

A huge portion of my life...has been dedicated to community organizing and advocacy for Oklahoma's tech communities. This year, however, I left my prior organizations...and have had a baby! When I'm not rocking Dorian to sleep or painting with Ada, I'm working on my freelance contracts. I work for myself now as a JavaScript programmer and absolutely love it!

What advice would you give to your 14-year-old self?

You know how you love to make your MySpace look awesome? There's an entire field in the workforce that PAYS you to do that all day long! Don't shy away from computers because guys tell you that you won't understand. If you have fun making websites, play MIDI files, and changing your background colors—then keep at it! Tech is a rewarding, fulfilling career if you choose it. Not everything is sunshine and rainbows, but you can make the best out of any field, so why not pick something awesome? Programming feels like being a magician. You can make nearly anything happen. Want an app? Want a website? Need to automate some super boring task? If you can dream it, you can code it. Go make some games, make a silly website, read the docs, and go have fun!

Are you interested in **VETERINARY MEDICINE?**

CAREER OVERVIEW

Veterinarians help prevent, diagnose, and treat health problems in a wide variety of animals. Regardless of whether the animal is a family pet, a prize-winning race horse, a dairy cow, a circus lion, or seal in a zoo, its healthcare depends on veterinarians.

PERSONALITY TRAITS OF SOMEONE WHO IS SUCCESSFUL IN THE FIELD

Patience, attention to detail, good communication skills, and a love of animals

SUBJECTS TO STUDY IN HIGH SCHOOL

Biology, chemistry, physics, algebra, geometry, calculus; if available, biotechnology

HIGHER EDUCATION

A career as a veterinarian requires a bachelor's degree, usually in biology, animal science, chemistry, or some other science field, followed by a four-year doctorate of veterinary medicine (DVM or VDM) degree from an accredited program. In addition, veterinarians must pass a state licensing exam prior to practicing. New graduates with a DVM degree may begin to practice veterinary medicine once they receive their license, but many new graduates choose to enter a 1-year internship. Interns receive a small salary, but often find that their internship experience leads to better paying opportunities later, relative to those of other veterinarians. Veterinarians who then seek board certification must also complete a 3- to 4-year residency program that provides intensive training in one of the 20 American Veterinary Medical Association (AVMA)-recognized veterinary specialties, including internal medicine, oncology, pathology, dentistry, nutrition, radiology, surgery, dermatology, anesthesiology, neurology, cardiology, ophthalmology, preventive medicine, and exotic small-animal medicine.

PROJECTED INCOME

U.S. Minimum Wage: \$15,080/yr.

U.S. Mean Wage: \$49,630/yr.

Median Veterinarian Wage: \$88,770/yr.

PROJECTED JOB GROWTH (2014-2024)

7% to 13%

Source & credit: www.sciencebuddies.org



FAYE MARIE LORENZSONN, D.V.M.

Veterinarian, WildCare Foundation

Biography

Dr. Faye Lorenzsonn is currently the veterinarian at WildCare Foundation, a nonprofit dedicated to wildlife rehabilitation, located in Noble, Oklahoma. There she works with over 7,000 native wild animals from over 140 different species annually with the goal of releasing healthy individuals back to nature. Lorenzsonn holds a doctor of veterinary medicine from

the University of Wisconsin's School of Veterinary Medicine, as well as a bachelor of science in zoology. She has been helping wildlife since 2005. Prior to vet school, she worked at the U.S. Geological Survey National Wildlife Center in conservation medicine, where she studied plague in prairie dog colonies. She has volunteered at numerous wildlife rehabilitation and animal shelters. She loves traveling and spent a couple years volunteering and working abroad before making Oklahoma her home.

Questions and Answers

What is one of the coolest things you have done in your job?

It's hard to pick a single thing. A lot of people think that working with eagles and bobcats is really cool, but I actually get really excited when I can fix broken bones on really tiny animals like bats and hummingbirds. Sometimes they are so tiny that you need to wear a magnifying glass for surgery, and come up with creative solutions like using a needle as a splint, so I think that is one of the coolest parts of my job.

What is a non-academia related skill that you find valuable in your job?

Being a good observer. When animals are scared, they try to hide that they are feeling sick or have an injury, so you really have to pay attention. Using your sense and paying attention to details are very important skills.

Do you think being a woman in your field is advantageous in any way to you and the work you do?

Yes I do! Veterinary medicine as well as wildlife rehab have become female-dominated fields, and so we don't face as many of the same challenges and stigma as women in male-dominated professions. We have a lot of compassion and more open communication together at work, which is very important.

What do you enjoy doing outside of work?

I love camping and hiking with my dogs when the weather is nice—anything outdoors. But I also enjoy painting and relaxing at home watching movies.

What advice would you give to your 14-year-old self?

Not to worry or stress too much about the future—in a couple years, nobody will remember if you did something embarrassing or said something stupid, and if they do, it becomes a funny story. In the long run, a bad grade isn't going to ruin your career. It's okay to have fun and do things differently from other people, and it's okay to be weird. Also, I was depressed a lot as a teenager, so would like to add that it gets a lot better, for real!!! Just hang in there!

Are you interested in **METEOROLOGY?**

CAREER OVERVIEW

The atmosphere is a blanket of gases surrounding Earth that creates our weather. Meteorologists study the measurements and motion of the atmosphere as well as the changing events within it so that they can predict the weather. This weather forecasting helps the general public and people who work in industries like shipping, air transportation, water and power, agriculture, fishing, and forestry better plan for the weather and reduce human and economic losses.

PERSONALITY TRAITS OF SOMEONE WHO IS SUCCESSFUL IN THE FIELD

Fascination with weather-related events, analytical skills, an ability to piece together the big picture from many small measurements, and the ability to communicate scientific results in plain language.

SUBJECTS TO STUDY IN HIGH SCHOOL

Chemistry, physics, computer science, algebra, geometry, calculus; if available, Earth science, statistics.

HIGHER EDUCATION

A bachelor's degree in meteorology or atmospheric science, or in a closely related field with courses in meteorology, is usually the minimum educational requirement for an entry-level position as an atmospheric scientist. An alternate path to obtain a position as an entry-level meteorologist with the federal government is a bachelor's degree in a related field (such as physics, chemistry, engineering, or mathematics) and at least 24 semester hours in meteorologist/atmospheric sciences courses. A master's degree is necessary for some positions, and a Ph.D. is required for most basic research positions.

PROJECTED INCOME

U.S. Minimum Wage: \$15,080/yr.

U.S. Mean Wage: \$49,630/yr.

Median Meteorologist Wage: \$92,460/yr.

PROJECTED JOB GROWTH (2014-2024)

Average 7% to 13%

Source & credit: www.sciencebuddies.org



KODI L. BERRY, PH.D.

Research Scientist

Biography

Dr. Kodi Berry is a Research Scientist and Sea Grant Liaison for the Cooperative Institute that supports the National Severe Storms Laboratory and the Executive Officer of the National Oceanic and Atmospheric Administration Hazardous Weather Testbed. Dr. Berry earned her Ph.D. and master's degree in meteorology from the University of Oklahoma

and bachelor's degree in meteorology/climatology from the University of Nebraska-Lincoln. Her primary area of research includes how broadcast meteorologists use and communicate probabilistic information in the Hazardous Weather Testbed. She also manages an interdisciplinary project, called CI-FLOW, that models coastal flooding during landfalling hurricanes in North Carolina.

Questions and Answers

What inspired you to want to pursue a career in your field?

Originally I planned on going into physical therapy but quickly realized in college that I am much better at physics than biology and chemistry. I literally sat down with the class bulletin and flipped through all the majors and their course requirements. When I got to meteorology and saw the physics requirement I thought, "That sounds perfect."

What is one of the most memorable things you've done in your job?

The most memorable experience of my career was attending the American Meteorological Society's Summer Policy Colloquium. The AMS Summer Policy Colloquium brings a select group of graduate students, faculty, and professionals to Washington, D.C., for an intense, 10-day immersion in science policy. It was an amazing ten days that serves as my gold standard for professional workshops and meetings.

What is the greatest challenge you've had to overcome in your life thus far?

The greatest challenge I've overcome was finishing my Ph.D. with a newborn baby. It was difficult to balance school, work, and family. However, she was my greatest motivation because I want her to know she can do anything she puts her mind to.